CALIFORNIA BIODIVERSITY NEWS

California Biodiversity Council

Spring / Summer 2011 Vol. 18 No. 1

by John Laird Co-Chair, California Biodiversity Council

FROM THE CHAIR

The next meeting of the California Biodiversity Council (CBC) is quickly approaching. This meeting will take a first-hand look at the Marine Life Protection Act (MLPA) which provides an enormous opportunity for biodiversity conservation in California, and the MLPA Initiative, a public-private partnership that has helped California implement the MLPA. Publicprivate partnerships will continue to play a significant role in implementing the MLPA. This meeting and the accompanying field tour will

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Measuring the Density and Diversity of Deep-water Species in Central California Waters

by Richard M. Starr, California Sea Grant Program and Mary Yoklavich, NOAA Fisheries

Deep rocky banks and outcrops, underwater pinnacles, and submarine canyons, ranging in depth from 30 meters to 1,000 meters, are important habitats in California waters. These deepwater habitats comprise 75 percent of the seafloor in state wa-

ters within the Central Coast region, and are home to hundreds of species of fishes and macroinvertebrates. Flatfishes, combfishes, poachers, and eelpouts are the dominant fish taxa on soft sediments, along with invertebrates such as sea pens

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From the Chair

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explore how these partnerships can guide a successful planning process and subsequent implementation.

The field trip will begin at Lover's Point in Pacific Grove to view marine protected areas (MPAs) adopted in 2007 and discuss the origin and history behind the MLPA Initiative. Discussions here will also include the nature of the public-private partnership involved in the initiative's MPA planning process. The next stop will be Point Lobos in Carmel to discuss some of the details of on-the-ground MPA implementation and the partnerships that help make it successful. Here you will walk the beach and bluffs in order to take a closer look at a protected area. After leaving Point Lobos, you will travel to the mouth of the Salinas River. This stop will be an opportunity to further discuss public-private partnerships and how they help to protect the marine environment by coordinating land-based activities. Discussions will focus on the landsea interface.

California's ocean and coastal resources play a significant role in the quality of our lives and in our state's economy. One of my goals as Secretary for Natural Resources is to implement a system of MPAs for the benefit of current and future generations. These MPAs have been adopted in three of the four study regions where planning has been completed under the MLPA Initiative; recommendations for the fourth study region are currently under consideration by the California Fish and Game Commission. We have reached an historical point in ocean and coastal protection in California. Now is not the time to falter, now is the time to continue pushing forward toward a healthier ocean for California and the nation.

I hope the result of this meeting will be to create a better understanding of the role both partnerships and MPAs play in maintaining the state's biological diversity. Moreover, I hope that it will promote greater recognition of the importance of educating and involving our constituents, bringing the best available science to the table, and the need to foster a balanced approach to marine protection.

I am excited to have the opportunity to chair the CBC and look forward to working with all of you to further coordinate the various environmental protection and natural resource management agencies at the state, local and federal levels.

I would like to acknowledge former Secretary for Natural Resources Mike Chrisman, for his tireless work on the MLPA and this CBC meeting. He has played an integral role in the planning of this meeting, and is owed a significant amount of gratitude for his vision and leadership.



The Agriculture Water Quality Alliance: A Unique Regional Partnership

by Bridgett Hoover, Monterey Bay National Marine Sanctuary

The Central Coast of California abounds in natural resources. Its rugged coastline and rolling valleys su-pport a diverse, \$5 Billion dollar agricultural industry that produces more than 200 crops. The region is also home to the Monterey Bay National Marine Sanctuary - the largest national marine sanctuary in the United States. As land use intensifies in this rich landscape, the protection of water resources grows increasingly urgent. Farmers are up against a number of challenges to stay viable, comply with regulations, and protect natural resources. In response to these challenges, farmers and agencies on the Central Coast have formed the Agriculture Water Quality Alliance (AWQA).

AWQA is a unique regional partnership that brings together farmers, ranchers, resource conservation agencies, researchers, and agricultural and environmental organizations to protect the health of Sanctuary waters and the productivity of Central Coast farmlands. Since 1999, AWQA partners

have worked together to reduce the runoff of sediments, nutrients, and pesticides from agricultural and rural lands through education and outreach, technical and financial assistance, research and monitoring, permit streamlining, and watershed coordination. AWQA's regional approach focuses on industry led initiatives and voluntary, collaborative solutions to tackling water quality problems.

2009-2010 has been a period of both great challenges and great successes for AWQA partners. Despite tough economic times, growers and ranchers have continued to invest both time and money on

implementing and evaluating the effectiveness of conservation practices. AWQA brought new federal funding to the region through the USDA to support irrigation and nutrient efficiency programs. We celebrated the 10-year anniversary of the Agriculture and Rural Lands Plan, and a decade of

collaborative problem-solving. This report highlights just some of the many accomplishments of the AWQA partnership during 2009-2010. While celebrating our accomplishments, we are mindful of the challenges that still lay before us. The need for collaboration in protecting water quality has never been greater.



Measuring the Density and Diversity of Deep-water Species

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and seastars. Rocky areas are dominated by more than 40 species of rockfishes and many invertebrate taxa such as feather stars, anemones, and gorgonian corals. Although deep habitats on the continental shelf and upper slope contain a high diversity of species that have been fished for decades, far less is known about these habitats and associated communities than those occurring in shallow water.

On September 21, 2007, 29 marine protected areas (MPAs) were established off Central California, including two types in deep water: State Marine Reserves (SMR) and State Marine Conservation Areas (SMCA). In 2007, we received funding to collect baseline data in the deep portions of eight of the new MPAs and associated Reference sites. We used the manned submersible Delta to survey all fishes and structure-forming invertebrates (e.g., deepsea coral communities) in 164,000 square meters of seafloor habitats from 24–365 meters deep in Monterey Bay and along

the Big Sur coast. Manned submersibles are useful for studying the biodiversity of fishes and invertebrates in high-relief rocky habitats, which are difficult to survey using other tools. An additional benefit of surveying with a manned submersible is that our ability to detect and identify cryptic or small species and individuals that are critical prey items of larger fishes is much greater than observations made from videotape alone.

Our submersible surveys followed protocols that have been vetted and peerreviewed in the scientific literature. A pilot operated the submersible while an experienced scientist identified all fish species and estimated their lengths, using paired lasers as a guide, within a 2 meter-wide strip adjacent to the submersible. Each dive included multiple 10 min-long transects in a predetermined habitat. The length of each transect was determined accurately using a Doppler velocity log and ring-laser gyrocompass. Transect width was estimated



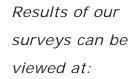
by scientific observers with the aid of a hand-held sonar device. Each transect was documented with an external video camera and annotated in realtime by the scientist. Invertebrates and habitats were quantified from the videotape.

The transects provided estimates of abundance, size distribution, and species composition of adult and juvenile fish assemblages and key invertebrate species in the new MPAs. During 337 quantitative transects in 2007,

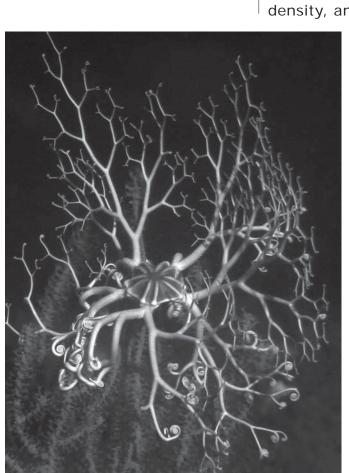
we observed nearly 66,000 fishes from 110 taxa, and 158,000 aggregating and 14,000 structure-forming invertebrates from 70 taxa. During our evaluation of the deep-water rocky habitats in the new MPAs, we observed 95% of the rockfish species that are known to occur in Central California. This comprehensive baseline will be used in the future to critically evaluate the effectiveness of the new MPAs by assessing changes in the diversity, density, and size composition

> of species using seafloor habitats in the new MPAs.

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http://seagrant.mlml.
calstate.edu/
wp-content/uploads/2009/04/
subimpactreport.
pdf



The California Biodiversity Council is Turning 20!

In September 2011 the
California Biodiversity Council
will be 20 years old, marking
20 strong years of cooperative conservation among state,
federal and local governemments statewide. Council
members have come and
gone, visions and values have
evolved over the years, but
the Council has consistently
met and shared a common
goal: better conservation and
manangement through cooperation.

The Council's Executive
Committee is in the process of planning the 20th Anniversary
Celebration which will be held on September 14, 2011. The event will be held at the historic California State Railroad Museum in old town Sacramento. The meeting will begin with a keynote address about teh evolution of biodiversity conservation over the past twenty years. Some of the original founders of the Cali-

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is Turning 20!

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fornia Biodiversity Council will be in attendance and will reflect on the origin and purpose for the formation of the Biodiversity Council. The Council's unoffocial photographer Rick Rayburn will present a photo tour of the places the Council has visited throughout its existence. Reflections on the Council, its evolution, challenges and successes will be shared by longtime members. Then, following a discussion on the future of the Council, participants will have an additional chance to reflect on twenty years during a reception in the Roundhouse of the Railroad Museum.

Mark your calendars for September 14, 2001 and bring your memories to share!

Do you have photos of events from the Council's first 10 years, between 1991 and 2001? If you do, please contact Lauren McNees at lauren.mcnees@fire.ca.gov.

The Council | Council Visits Graeagle to **Discuss Forest Restoration** and Resiliency

In October the California Biodiversity Council met for two days in Graeagle, California to learn about the complexities of managing forest restoration and resiliency. Graeagle is located in the Sierra Nevadas in Plumas county.

The first day consisted of a field tour which began in Calpine. The first site visit focused on community fuel reduction projects, and participants learned what was involved in a fuel reduction project conducted by the local Fire Safe Council, Sierra and Plumas counties, and the Quincy Library Group. The second stop highlighted landscape-scale forest and meadow restoration, an important component in forest health as well as water quality and supply. One of the methods the pariticipants saw is the "pond and plug" method of meadow restoration. Finally, the tour visited an aspen restoration site. Representatives from the Tahoe National Forest explained the process of restoring a quaking aspen grove, as



aspen are a key component to the biodiversity of a meadow ecosystem. After the tour, at the Chalet View Lodge in Graeagle, CBC participants learned about the science and monitoring involved in forest restoration from John Sheehan, Plumas Corporation and Mike De Lasaux, UC Cooperative Extension.

The second day in Graeagle consisited of the Council's meeting in the Graeagle Fire Station. To compliment what participants saw the previous day, the first panel discussion addressed ongoing and future challenges to the Sierra Nevada region. Chris Keithley, Department of Forestry and Fire Protection, gave a brief overview of the role fire plays in forest health. Dave Graber, National Park Service, explained how climate change is expected to pose serious challenges for the region. Eric Hong, Department of Water Resources, spoke about the challenges California faces for water supply and how the Sierra Nevada plays a huge role. Jonathan Kusel, Sierra Institute for Community and Environment, shared local



knowledge about the state of local communities in the region.

Following this panel, four speakers shared inspiring stories about partnerships that exist in the Sierra to help combat some of the challenges it faces. Todd Sloat, Pit River Alliance, spoke about the collaborative Burney/Hat Creek Community Forest and Watershed Group. Paul Hardy, Feather River Land Trust, explained the importance of the Northern Sierra Partnership which implements targeted planning efforts supported by the community. John Battles, UC Berkeley, explained the methods the Sierra Nevada

Adaptive Management Project utilizes to manage forests in an innovative manner. Jessica Pearson, Natural Resources Agency, explained the agency's vision for Total Resource Management as a holistic approach to resource management.

Finally, the day's meeting concluded with a panel discussion on how the challenges the two-day meeting highlighted should be addressed in the future. Jim Branham, Sierra Nevada Conservancy, Robert Meacher, Plumas County, and Jonathan Kusel led a fruitful discussion on the options and how the Council can play a role.

Have You Joined the Federal Agency Network (FAN) on LinkedIn?

The California Department of Water Resources, with the assistance of the Center for Collaborative Policy, is well known for its use of Intergrated Resource Management with the California Water Plan. The California Biodiversity Council's Spring 2010 meeting in Fairfield, CA highlighted this approach.

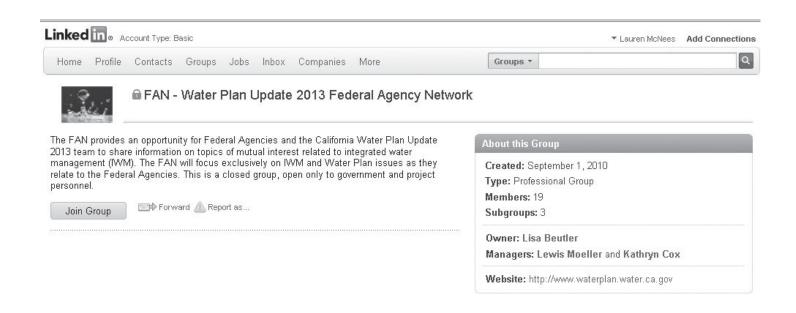
As the Department prepares for the 2013 Update of the Water Plan, it hopes to incorporate federal involvement into the process. To facilitate this, it has created a LinkedIn group called the "Federal Agency Network" (FAN) as a place where people can share information and learn about meetings and other resources.

There are two subgroups: Water Quality and Range and Forest Management. The group(s) are not limited only to federal employees; all interested parties may join. It is free and easy to join, and does not involve any committment. It is recommended,

however, that you accept group announcements that are delivered weekly in email form.

To sign up, please visit http://www.linkedin.com/groups?mostPopular=&gid=3363425

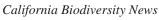
For more information, please contact Lisa Beutler at lisa-beutler@comcast.net



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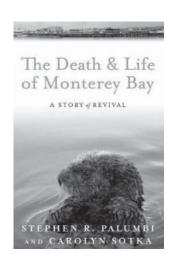
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Reading

The Death and Life of Monterey Bay:
A Story of Revival by Stephen R. Palumbi and Carolyn Sotka begins in the eighteenth century when Spanish and French explorers encountered a rocky shoreline brimming with life. A century and a half later, many of the sea creatures had disappeared, replaced by sardine canneries that sickened residents with their stench but kept the money flowing. When the fish ran out and the climate turned, the factories emptied and



the community crumbled. But today, both Monterey's economy and wildlife are resplendent. How did it happen? The answer is deceptively simple: through the extraordinary acts of ordinary people. Available for \$26.95 from Island Press at http://www.islandpress.org/.

Naturalist by E.O. Wilson describes for the first time both his growth as a scientist and the evolution of the science he has helped define. He traces the trajectory of his life detailing how his youthful fascination with nature blossomed into a lifelong calling. The story of Wilson's life provides fascinating insights into the making of a scientist, and a valuable look at some of the most thought-provoking ideas of our time. Available for \$25.00 from Island Press at http://www.islandpress.org/.

The Living Landscape: an Ecological Approach to Landscape Planning by Frederick R. Steiner is a manifesto, resource, and textbook for architects, landscape architects, environmental planners, students, and others involved in creating human communities. Available for \$45.00 from Island Press at http://www.islandpress.org/.

Ocean: An Illustrated Atlas (National Geographic Atlas) by Sylvia A. Earle and Linda K. Glover details a mysterious realm that's as vital to our existence as the air we breathe. This new atlas immerses readers in the wonders of the deep through more than 250 up-to-the-minute maps, photographs, and satellite images. Available for \$40.95 at http://www.amazon.com.

Digital Resources

Learn About Natural Hazards l n Your **Neighborhood** by using the Hazard Mitigation Portal developed by the California Emergency Management Agency. For any address in California, users may view hazard risks posed by earthquake, flood, fire or tsunami. Check it out at: http://myhazards. <u>calema.ca.gov/</u>

CoolCalifornia.org, is an online resource for local governments, schools, businesses, and individuals. CoolCalifornia.org aims to provide resources to all Californians in order to reduce their environmental impact and take action to stop climate change. The site offers carbon footprint and greenhouse gas emissions calculation tools, success stories, and educational resources. Visit http://coolcalifornia.org/.





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TBD
Northern California Counties Assn.

Upcoming Events

March 23- Restoring Salmonids: Holding the 26, 2011 Line on the Species Decline

Sponsor: Salmonid Restoration Federation

Location: San Luis Obispo, CA http://www.calsalmon.org

March 28- Geospatial Technologies in Ag and 31, 2011 Natural Resources Symposium

Sponsor: CalGIS, URISA and Kearney Ag-

ricultural Center Location: Fresno, CA http://www.gis.uckac.edu

March 30, Forest Management and Watershed 2011 Science Symposium

Sponsor: UC Cooperative Extension

Location: Susanville, CA

http://celassen.ucdavis.edu/Watershed

Science Symposium/

May 22- World Environmental and Water Resources 26, 2011 Congress

Sponsor: American Society of Civil Engineers' Environmental & Water Resources Institute

Location: Palm Springs, CA

http://content.asce.org/conferences/ewri2011/

June 21- Coast Redwood Forests in a Changing
23, 2011 California: A Symposium for Scientists and
Managers

Sponsor: Unviersity of California, Cal Poly and

Humboldt State

Location: UC Santa Cruz, Santa Cruz, CA

http://ucanr.org/sites/redwood

Sept. 14, California Biodiversity Council
2011 20th Anniversary Meeting and Celebration

Sponsor: California Biodiversity Council

Location: Sacramento, CA

http://biodiversity.ca.gov/meetings.html





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